

FIG. 1

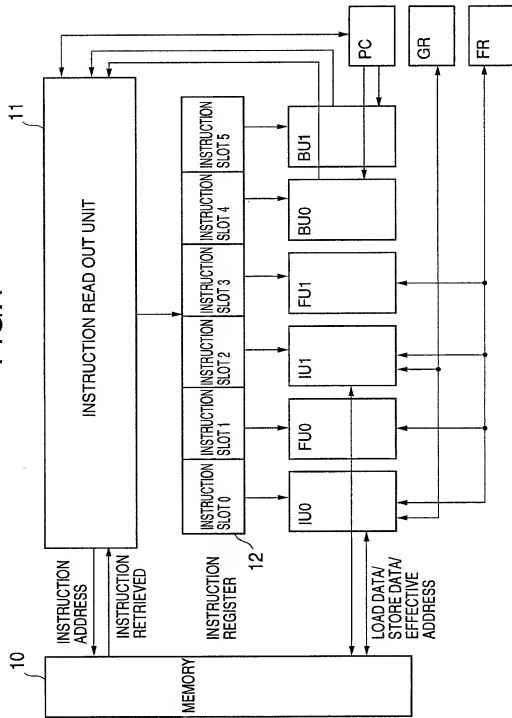


FIG. 2

0x00000000	ADD	FADD	ADD	FADD	← VLIW 1
0x00000010	NOP	NOP	ADD	NOP	← VLIW 2
0x00000020	NOP	NOP	NOP	NOP	
0x00000030	NOP	FADD	NOP	NOP	← VLIW 3
0x00000040	NOP	NOP			
					○
					○
					○

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FIG. 3

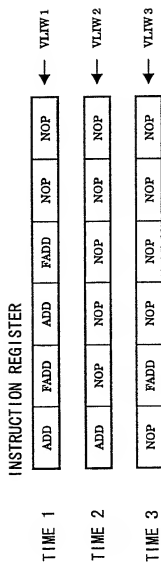


FIG.4

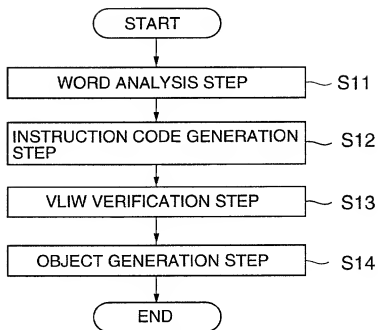


FIG.5

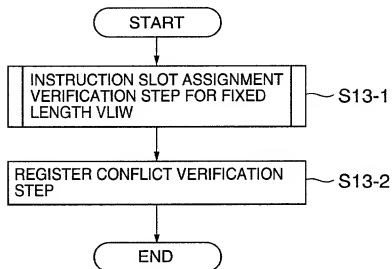


FIG.6

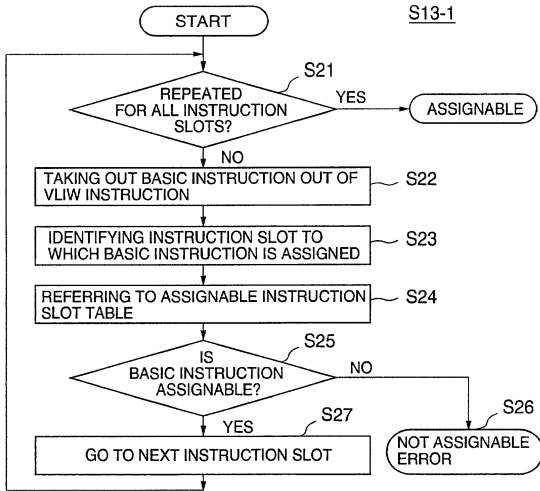


FIG.7

BASIC INSTRUCTION	INSTRUCTION SLOT					
	SLOT 0	SLOT 1	SLOT 2	SLOT 3	SLOT 4	SLOT 5
ADD	O	—	O	—	—	—
FADD	—	O	—	O	—	—
BRA	—	—	—	—	O	O

O : ASSIGNABLE

— : NOT ASSIGNABLE

FIG.8

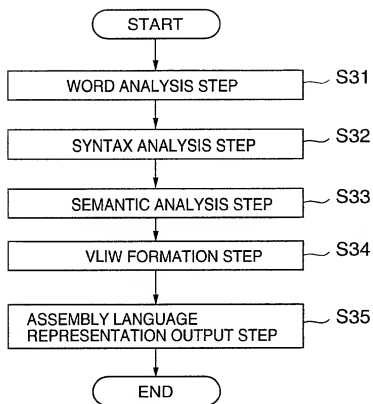


FIG.9

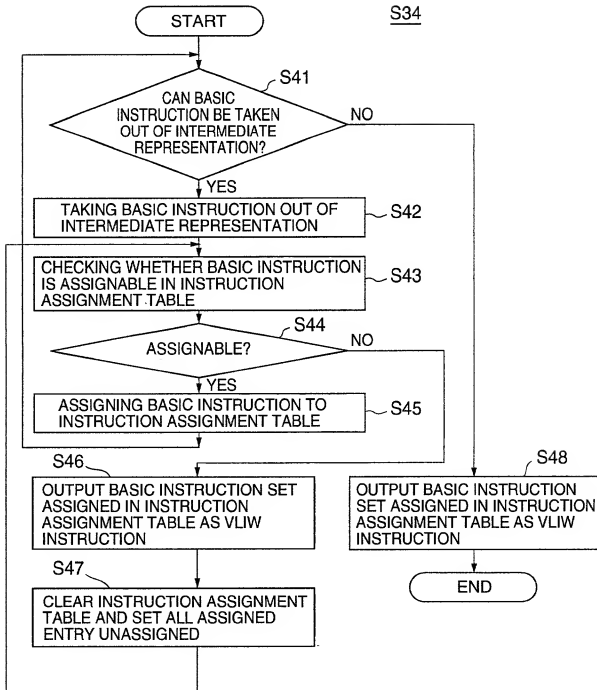


FIG.10

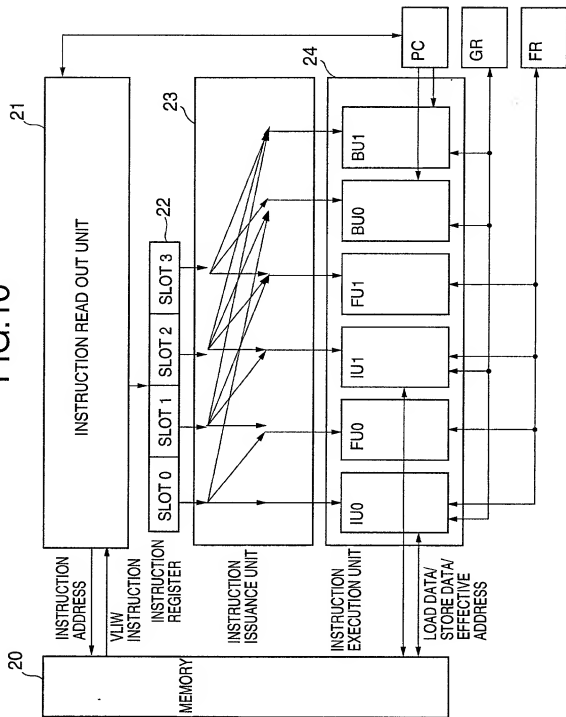


FIG.11

INSTRUCTION SLOT 0	INSTRUCTION SLOT 1	INSTRUCTION SLOT 2	INSTRUCTION SLOT 3
I0	F0	I1	F0
I0	F0	I1	B0
I0	F0	I1	
I0	F0	I1	B0
I0	F0	F1	
I0	F0	F1	B0
I0	F0	B0	B1
I0	F0	B0	
I0	F0		
I0	I1	B0	B1
I0	I1	B0	
I0	I1		
F0	F1	B0	B1
F0	F1	B0	
F0	F1		
I0	B0	B1	
I0	B0		
I0			
F0	B0	B1	
F0	B0		
F0			
B0	B1		
B0			

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FIG.12

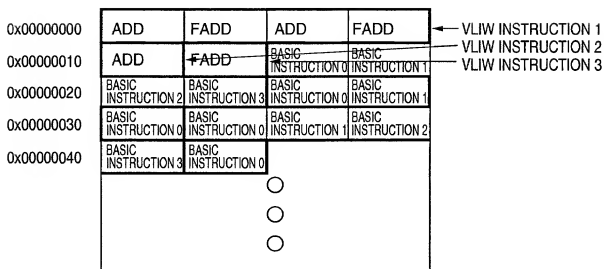


FIG.13

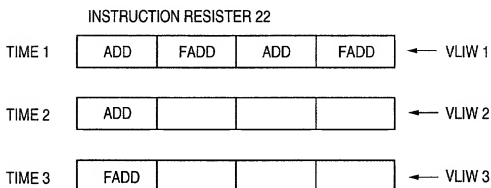


FIG.14

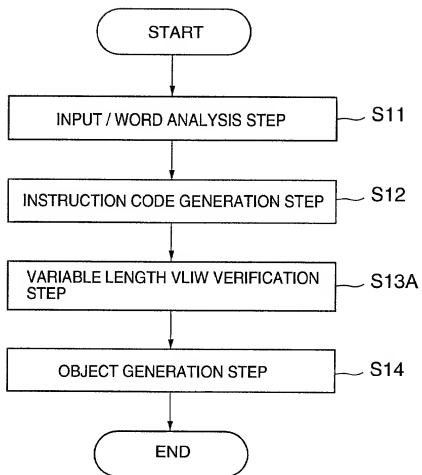


FIG.15

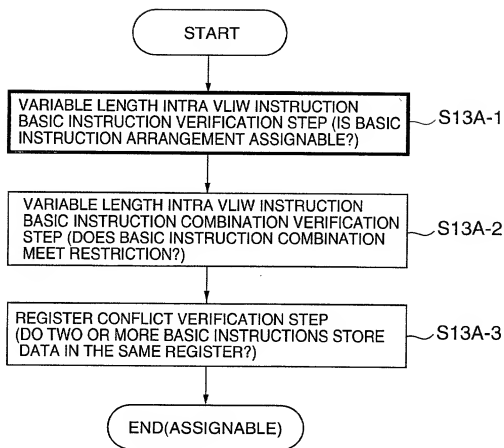


FIG.16

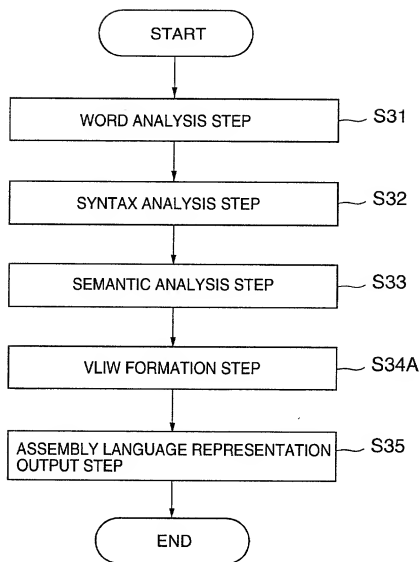


FIG.17

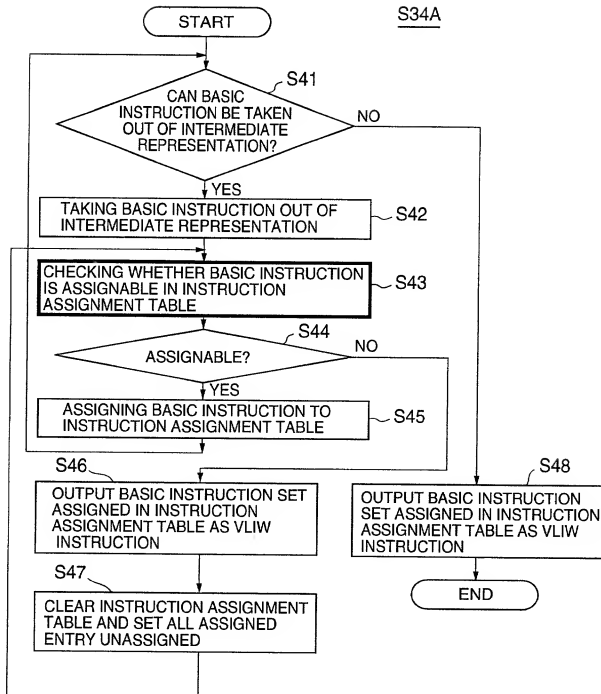


FIG.18

BASIC INSTRUCTION	FUNCTIONAL UNIT CLASSIFICATION
ADD	IU
FADD	FU
BRA	BU

IU : EXECUTABLE BY INTEGER UNITS

FU : EXECUTABLE BY FLOATING UNITS

BU : EXECUTABLE BY BRANCH UNIT

FIG.19

LOGICAL INSTRUCTION SLOT	ASSIGNABLE FUNCTIONAL UNIT CLASSIFICATION		
	IU	FU	BU
0	○	—	—
1	—	○	—
2	○	—	—
3	—	○	—
4	—	—	○
5	—	—	○

○ : EXECUTABLE — : NOT EXECUTABLE

FIG.20

PHYSICAL INSTRUCTION SLOT	INSTRUCTION INFORMATION ASSIGNED
INSTRUCTION SLOT 0	—
INSTRUCTION SLOT 1	—
INSTRUCTION SLOT 2	—
INSTRUCTION SLOT 3	—

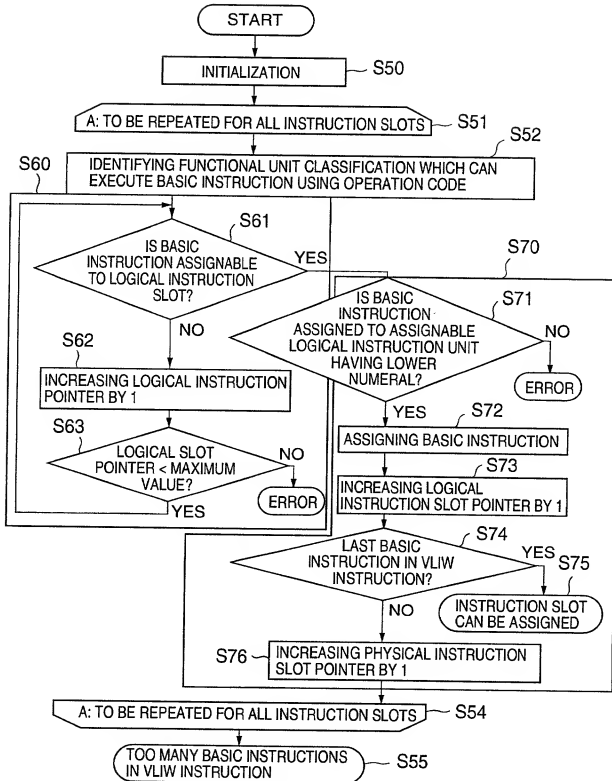
— : NOT ASSIGNED ○ : ASSIGNED

FIG.21

FUNCTIONAL UNIT	FUNCTIONAL UNIT NUMBER OF EACH FUNCTIONAL UNIT TO WHICH BASIC INSTRUCTION IS ASSIGNED (BIT PATTERN)			
	0	1	2	3
IU	—	—	—	—
FU	—	—	—	—
BU	—	—	—	—

○ : ASSIGNED — : NOT ASSIGNED

FIG.22



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FIG.23

BASIC INSTRUCTION OPERATION CODE	FUNCTIONAL UNIT CLASSIFICATION	FUNCTIONAL UNIT NUMBER OF FUNCTIONAL UNIT CLASSIFICATION			
		0	1	2	3
ADD	IU	○	○	—	—
FADD	FU	○	○	—	—
BRA	BU	○	○	—	—

IU : EXECUTABLE BY INTEGER UNIT

FU : EXECUTABLE BY FLOATING UNIT

BU : EXECUTABLE BY BRANCH UNIT

○ : ASSIGNABLE

— : NOT ASSIGNABLE

FIG.24

LOGICAL INSTRUCTION SLOT	ASSIGNABLE FUNCTIONAL UNIT CLASSIFICATION			FUNCTIONAL UNIT NUMBER OF EACH FUNCTIONAL UNIT CLASSIFICATION			
	IU	FU	BU	0	1	2	3
0	○	—	—	○	—	—	—
1	—	○	—	○	—	—	—
2	○	—	—	—	○	—	—
3	—	○	—	—	○	—	—
4	—	—	○	○	—	—	—
5	—	—	○	—	○	—	—

○ : ASSIGNABLE

— : NOT ASSIGNABLE

FIG.25

BASIC INSTRUCTION	INSTRUCTION CATEGORY
ADD	I_1
DIV	I_2
FADD	F_1
BRA	B_1

I_1: INTEGER CATEGORY 1

I_2: INTEGER CATEGORY 2

F_1: FLOATING CATEGORY 1

B_1: BRANCH CATEGORY 1

FIG.26

LOGICAL INSTRUCTION SLOT	FUNCTIONAL UNIT CLASSIFICATION	BIT PATTERN OF FUNCTIONAL UNIT NUMBER OF EACH FUNCTIONAL UNIT CLASSIFICATION			
		0	1	2	3
I_1	IU	○	○	—	—
I_2	IU	○	—	—	—
F_1	FU	○	○	—	—
B_1	BU	○	—	—	—

○ : EXECUTABLE — : NOT EXECUTABLE

FIG.27

LOGICAL INSTRUCTION SLOT	ASSIGNABLE FUNCTIONAL UNIT CLASSIFICATION			BIT PATTERN OF FUNCTIONAL UNIT NUMBER OF EACH FUNCTIONAL UNIT CLASSIFICATION			
	IU	FU	BU	0	1	2	3
0	○	—	—	○	—	—	—
1	—	○	—	○	—	—	—
2	○	—	—	—	○	—	—
3	—	○	—	—	○	—	—
4	—	—	○	○	—	—	—
5	—	—	○	—	○	—	—

○ : EXECUTABLE — : NOT EXECUTABLE

FIG.28

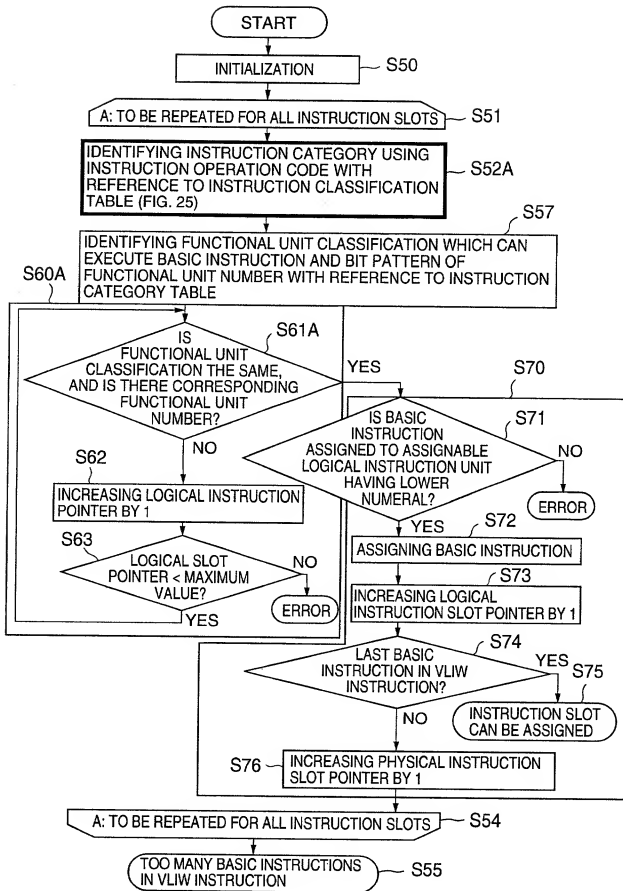
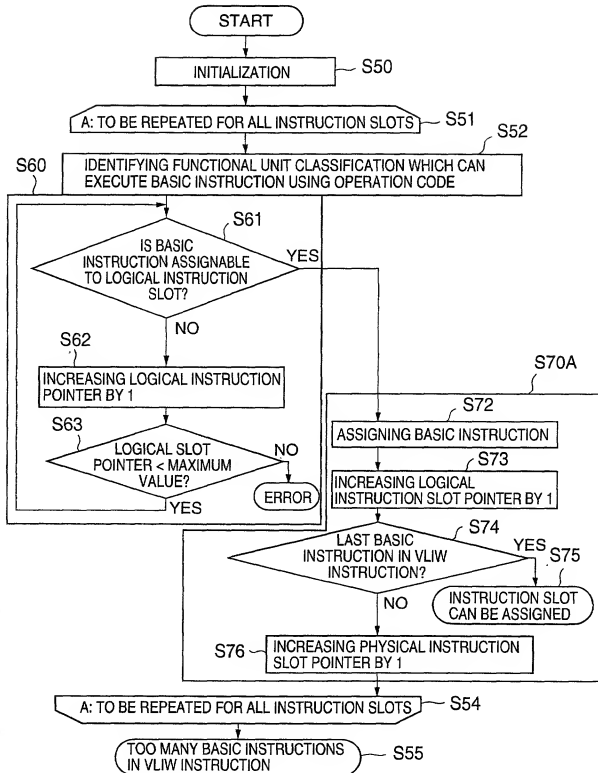
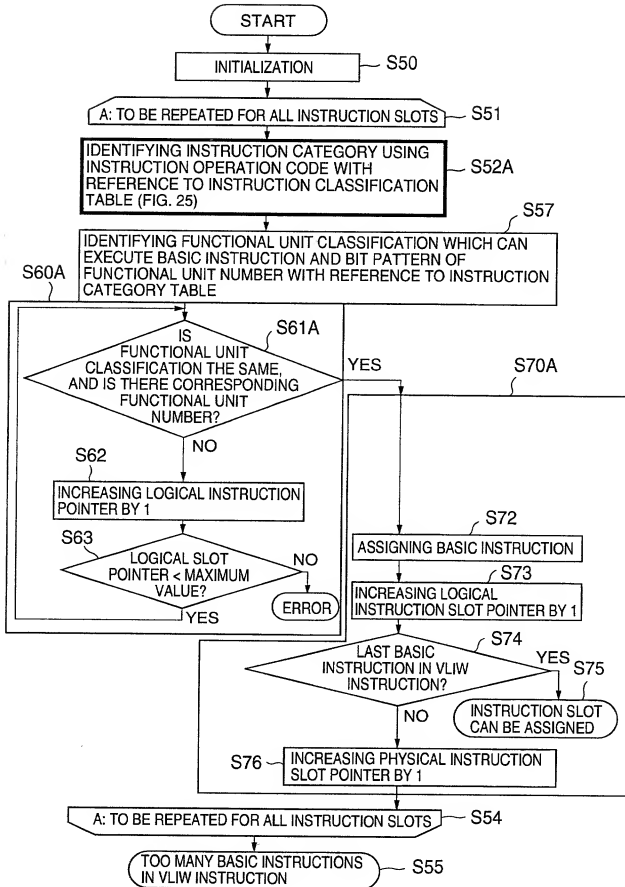


FIG.29



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FIG.30



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FIG.31

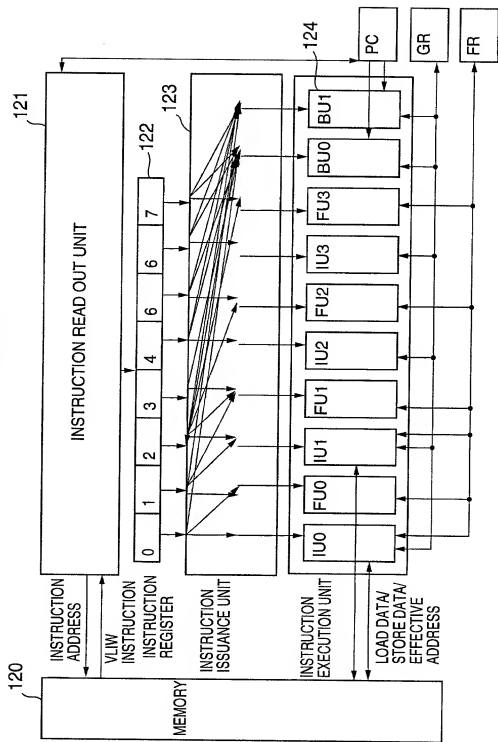


FIG.32

INSTRUCTION SLOT 0	INSTRUCTION SLOT 1	INSTRUCTION SLOT 2	INSTRUCTION SLOT 3	INSTRUCTION SLOT 4	INSTRUCTION SLOT 5	INSTRUCTION SLOT 6	INSTRUCTION SLOT 7
I0	F0	I1	F1	I2	F2	I3	F3
I0	F0	I1	F1	I2	F2	I3	B0
I0	F0	I1	F1	I2	F2	I3	
I0	F0	I1	F1	I2	F2	F3	B0
I0	F0	I1	F1	I2	F2	F3	
I0	F0	I1	F1	I2	F2	B0	B1
I0	F0	I1	F1	I2	F2	B0	
I0	F0	I1	F1	I2	F2		
I0	F0	I1	F1	I2	I3	B0	B1
I0	F0	I1	F1	I2	I3	B0	
I0	F0	I1	F1	I2	I3		
I0	F0	I1	F1	F2	F3	B0	B1
I0	F0	I1	F1	F2	F3	B0	
I0	F0	I1	F1	F2	F3		
I0	F0	I1	F1	I2	B0	B1	
I0	F0	I1	F1	I2	B0		
I0	F0	I1	F1	I2			
I0	F0	I1	F1	F2	B0	B1	
I0	F0	I1	F1	F2	B0		
I0	F0	I1	F1	F2			
I0	F0	I1	I2	I3	B0	B1	
I0	F0	I1	I2	I3	B0		
I0	F0	I1	I2	I3			
I0	F0	F1	F2	F3	B0	B1	
I0	F0	F1	F2	F3	B0		
I0	F0	F1	F2	F3			
I0	F0	I1	F1	B0	B1		
I0	F0	I1	F1	B0			
I0	F0	I1	F1				
I0	F0	I1	I2	B0	B1		
I0	F0	I1	I2	B0			
I0	F0	I1	I2				
I0	F0	F1	F2	B0	B1		
I0	F0	F1	F2	B0			
I0	F0	F1	F2				
I0	F0	I1	I2	B0	B1		
I0	F0	I1	I2	B0			
I0	F0	I1	I2				
F0	F1	F2	F3	B0	B1		
F0	F1	F2	F3	B0			

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FIG. 33

F0	F1	F2	F3				
I0	I1	I2	I3	B0	B1		
I0	I1	I2	I3	B0			
I0	I1	I2	I3				
I0	F0	I1	B0	B1			
I0	F0	I1	B0				
I0	F0	I1					
I0	F0	F1	B0	B1			
I0	F0	F1	B0				
I0	F0	F1					
F0	F1	F2	B0	B1			
F0	F1	F2	B0				
F0	F1	F2					
I0	I1	I2	B0	B1			
I0	I1	I2	B0				
I0	I1	I2					
I0	F0	B0	B1				
I0	F0	B0					
I0	F0						
F0	F1	B0	B1				
F0	F1	B0					
F0	F1						
I0	I1	B0	B1				
I0	I1	B0					
I0	I1						
I0	B0	B1					
I0	B0						
I0							
F0	B0	B1					
F0	B0						
F0							
B0	B1						
B0							

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FIG.34

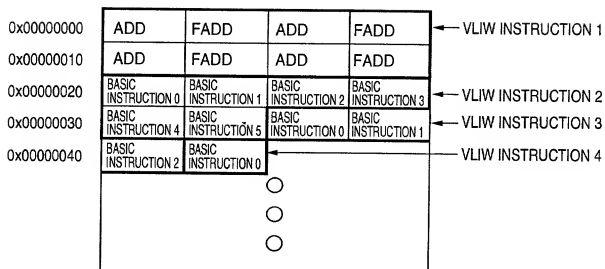


FIG. 35

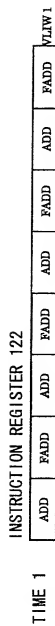


FIG.36

INSTRUCTION OPERATION CODE	FUNCTIONAL UNIT CLASSIFICATION	FUNCTIONAL UNIT NUMBER OF EACH FUNCTIONAL UNIT CLASSIFICATION			
		0	1	2	3
ADD	IU	○	○	○	○
FADD	FU	○	○	○	○
BRA	BU	○	○	—	—

IU : EXECUTABLE BY INTEGER UNIT

FU : EXECUTABLE BY FLOATING UNIT

BU : EXECUTABLE BY BRANCH UNIT

○ : ASSIGNABLE

— : NOT ASSIGNABLE

FIG.37

LOGICAL INSTRUCTION SLOT	ASSIGNABLE FUNCTIONAL UNIT CLASSIFICATION			FUNCTIONAL UNIT NUMBER OF EACH FUNCTIONAL UNIT CLASSIFICATION			
	IU	FU	BU	0	1	2	3
0	○	—	—	○	—	—	—
1	—	○	—	○	—	—	—
2	○	—	—	—	○	—	—
3	—	○	—	—	○	—	—
4	○	—	—	—	—	○	—
5	—	○	—	—	—	○	—
6	○	—	—	—	—	—	○
7	—	○	—	—	—	—	○
8	—	—	○	○	—	—	—
9	—	—	○	—	○	—	—

○ : ASSIGNABLE

— : NOT ASSIGNABLE

FIG.38

INSTRUCTION OPERATION CODE	INSTRUCTION CATEGORY
ADD	I_1
FADD	F_1
BRA	B_1

I_1 : INTEGER CATEGORY 1

F_1 : FLOATING CATEGORY 1

B_1 : BRANCH CATEGORY 1

FIG.39

INSTRUCTION CATEGORY	FUNCTIONAL UNIT CLASSIFICATION	FUNCTIONAL UNIT NUMBER OF EACH FUNCTIONAL UNIT CLASSIFICATION			
		0	1	2	3
I_1	IU	○	○	—	—
F_1	FU	○	○	—	—
B_1	BU	○	○	—	—

○ : EXECUTABLE — : NOT EXECUTABLE

FIG.40

LOGICAL INSTRUCTION SLOT	ASSIGNABLE FUNCTIONAL UNIT CLASSIFICATION			FUNCTIONAL UNIT NUMBER OF EACH FUNCTIONAL UNIT CLASSIFICATION			
	IU	FU	BU	0	1	2	3
0	○	—	—	○	—	—	—
1	—	○	—	○	—	—	—
2	○	—	—	—	○	—	—
3	—	○	—	—	○	—	—
4	—	—	○	○	—	—	—
5	—	—	○	—	○	—	—

○ : EXECUTABLE — : NOT EXECUTABLE

FIG.41

INSTRUCTION OPERATION CODE	INSTRUCTION CATEGORY
ADD	I_1
FADD	F_1
BRA	B_1

I_1 : INTEGER CATEGORY 1

F_1 : FLOATING CATEGORY 1

B_1 : BRANCH CATEGORY 1

FIG.42

INSTRUCTION CATEGORY	FUNCTIONAL UNIT CLASSIFICATION	FUNCTIONAL UNIT NUMBER OF EACH FUNCTIONAL UNIT			
		0	1	2	3
I_1	IU	○	○	—	—
F_1	FU	○	○	—	—
B_1	BU	○	○	—	—

○ : ASSIGNABLE

— : NOT ASSIGNABLE

FIG.43

LOGICAL INSTRUCTION UNIT	ASSIGNABLE FUNCTIONAL UNIT CLASSIFICATION			FUNCTIONAL UNIT NUMBER OF EACH FUNCTIONAL CLASSIFICATION			
	IU	FU	BU	0	1	2	3
0	○	—	—	○	—	—	—
1	—	○	—	○	—	—	—
2	○	—	—	—	○	—	—
3	—	○	—	—	○	—	—
4	○	—	—	—	—	○	—
5	—	○	—	—	—	○	—
6	○	—	—	—	—	—	○
7	—	○	—	—	—	—	○
8	—	—	○	○	—	—	—
9	—	—	○	—	○	—	—

○ : ASSIGNABLE

— : NOT ASSIGNABLE